SAFETY DATA SHEET

LANXESS
Energizing Chemistry

MLA-3202

Version: 1.13 Revision Date: 09/18/2018 Print Date: 09/18/2018

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: MLA-3202

Product Use Description: Lubricant additive
For research use only.

Synonyms: Bis-(2-hydroxypropyl) Tallowamide

Company: LANXESS Solutions US Inc.
2 Armstrong Road
Shelton, CT
06484
United States of America (USA)

Telephone: (US) +1 866-430-2775

Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300
:
: US : 800-292-5898 (Technical inquiries)

For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by Product Safety Department
(US) +1 866-430-2775

MSDSRequest@lanxess.com

Recommended use of the chemical and restrictions on use

Recommended use : Lubricant additive
For research use only.

Restrictions on use : Reserved for industrial and professional use.

SECTION 2. HAZARDS IDENTIFICATION

Form	liquid
Colour	amber clear
Odour	not significant

GHS Classification

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Signal word : **Warning**

Hazard pictograms :

Hazard statements : H410 Very toxic to aquatic life with long lasting effects.

Other hazards : None

Other Hazardous Information : Skin sensitisation, Specific Target Organ Toxicity

Precautionary statements : **Prevention:**
P273 Avoid release to the environment.
Response:
P391 Collect spillage.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Carcinogenicity:

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Concentration (%)
Amides, tallow, N,N-bis(2-hydroxypropyl)	1454803-04-3	>= 90 - <= 100 %

SECTION 4. FIRST AID MEASURES

If inhaled	:	Move to fresh air. Obtain medical attention.
In case of skin contact	:	If on clothes, remove clothes. Wash off with soap and water. Get medical attention if irritation develops and persists.
In case of eye contact	:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists.
If swallowed	:	If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Rinse mouth with water. Obtain medical attention.
Most important symptoms and effects, both acute and delayed	:	None known.
Notes to physician	:	For specialist advice physicians should contact the Poisons Information Service.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Extinguishing media - large fires Alcohol-resistant foam Foam Extinguishing media - small fires Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	Water spray jet
Specific hazards during firefighting	:	Do not allow run-off from fire fighting to enter drains or water courses.
Special protective equipment for firefighters	:	Wear full protective clothing and self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Avoid contact with skin and eyes.
Environmental precautions	:	Do not allow material to contaminate ground water system.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Sweep up and shovel into suitable containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Use only in well-ventilated areas. In case of insufficient ventilation, wear suitable respiratory equipment.
Conditions for safe storage	:	Keep containers tightly closed in a dry, cool and well-ventilated place.
Materials to avoid	:	Oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Engineering measures	:	Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection	:	In case of insufficient ventilation, wear suitable respiratory equipment.
Hand protection Remarks	:	Impervious gloves
Eye protection	:	Safety glasses with side-shields
Skin and body protection	:	Long sleeved clothing To protect against splashes from pouring:

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Color	:	amber clear
Odor	:	not significant
Odour Threshold	:	No data available
pH	:	6.5, Method: EPA OPPTS 830.7000 (pH) (undiluted) 4.7, Method: EPA OPPTS 830.7000 (pH) 1% Solution
Melting point/freezing point	:	-50 - 10 °C Method: OPPTS 830.7200
Boiling point/boiling range	:	Decomposition: Decomposes below the boiling point. Method: OPPTS 830.7220
Evaporation rate	:	No data available
Flash point	:	Method: ASTM D 93, closed cup does not flash
Flammability (solid, gas)	:	Method: Flammability (contact with water)
Auto-flammability	:	360 °C1,008.2 - 1,015.5 hPa Method: Regulation (EC) No. 440/2008, Annex, A.15
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	0.0000021 Pa (20 °C) Method: OPPTS 830.7950 0.0000046 Pa (25 °C) Method: OPPTS 830.7950
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.941 g/cm3Method: OPPTS 830.7300
Solubility(ies)		
Water solubility	:	0.54 mg/l (20 °C) Method: OPPTS 830.7840

Solubility in other solvents	:	completely soluble Solvent: Organic solvents
Partition coefficient: n-octanol/water	:	log Pow: >= 5.3Method: OPPTS 830.7570
Auto-ignition temperature	:	No data available
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	245 mm2/s (40 °C) Method: OPPTS 830.7100 1116 mm2/s (20 °C) Method: OPPTS 830.7100
Explosive properties	:	Method: Regulation (EC) No. 440/2008, Annex, A.14 Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing. Method: Regulation (EC) No. 440/2008, Annex, A.21
Surface tension	:	57.2 mN/m, 20 °C, OECD Test Guideline 115, Surface active agents
Molecular weight	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	No decomposition if stored normally.
Possibility of hazardous reactions	:	Hazardous polymerisation does not occur.
Conditions to avoid	:	Contamination
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	Carbon oxides Nitrogen oxides (NOx) Other hazardous decomposition products may be formed.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute inhalation toxicity : Remarks: At atmospheric temperature, this product has only a minimal risk of inhalation due to its low vapour pressure.
It was demonstrated that during intended and foreseen applications, no respirable aerosol is formed.

Components:

Amides, tallow, N,N-bis(2-hydroxypropyl):

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 423

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 402

Skin corrosion/irritation

Components:

Amides, tallow, N,N-bis(2-hydroxypropyl):
Species: Rabbit
Exposure time: 4 h
Assessment: No skin irritation
Method: OECD-Guideline No. 404

Species: reconstructed human epidermis (RhE)
Assessment: No skin irritation
Method: OECD Test Guideline 431
Remarks: Based on available data, the classification criteria are not met.

Species: human keratinocytes
Assessment: No skin irritation
Method: OECD Test Guideline 439

Serious eye damage/eye irritation

Components:

Amides, tallow, N,N-bis(2-hydroxypropyl):
Species: Rabbit
Exposure time: 72 h
Assessment: No eye irritation
Method: OECD Test Guideline 405

Respiratory or skin sensitisation

Components:

Amides, tallow, N,N-bis(2-hydroxypropyl):
Test Type: Buehler Test
Species: Guinea pig
Assessment: Non sensitizing.
Method: OECD Test Guideline 406
Result: Not a skin sensitizer.

Test Type: LLNA
Species: Mouse
Method: OECD Test Guideline 429
Result: May cause sensitisation by skin contact.
Remarks: Study finding likely a false positive, due to surface active property of substance.

Germ cell mutagenicity

Components:

Amides, tallow, N,N-bis(2-hydroxypropyl):

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation test Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay) Result: negative
	:	Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative
Germ cell mutagenicity - Assessment	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Components:

Amides, tallow, N,N-bis(2-hydroxypropyl):

Effects on fertility	:	Species: Rat Application Route: Oral General Toxicity - Parent: No observed adverse effect level: 1,000 mg/kg bw/day Method: OECD Test Guideline 421

Reproductive toxicity - Assessment : No toxicity to reproduction

STOT - repeated exposure

Components:

Amides, tallow, N,N-bis(2-hydroxypropyl):
Exposure routes: Ingestion
Target Organs: Lungs, Liver, spleen
Assessment: Based on available data, the classification criteria are not met.

Repeated dose toxicity

Components:

Amides, tallow, N,N-bis(2-hydroxypropyl):
Species: Rat
NOAEL: 1,000 mg/kg
Application Route: Oral
Exposure time: 28-day
Method: OECD Test Guideline 407

Aspiration toxicity

Product:

No aspiration toxicity classification

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Amides, tallow, N,N-bis(2-hydroxypropyl):

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 0.91 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

LC50 (Gobiocypris rarus (rare gudgeon)): 0.5 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.14 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae : NOEC (Pseudokirchneriella subcapitata (green algae)): 0.19 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : NOEC (activated sludge): 1,000 mg/l
Method: OECD Test Guideline 209

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Components:

Amides, tallow, N,N-bis(2-hydroxypropyl):

Biodegradability : Result: Inherently biodegradable.
Biodegradation: 77.9 %
Exposure time: 28 d
Method: OECD Test Guideline 302C

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Mobility in soil

Product:

Mobility : Remarks: No data available

Other adverse effects

Product:

Results of PBT and vPvB assessment : This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

Additional ecological information : No information on ecology is available.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : In accordance with local and national regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No.	:	UN 3082
Proper shipping name	:	Environmentally hazardous substance, liquid, n.o.s. (Amides, tallow, N,N-bis(2-hydroxypropyl))
Class	:	9
Packing group	:	III
Labels	:	Miscellaneous

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Amides, tallow, N,N-bis(2-hydroxypropyl))
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

49 CFR

UN/ID/NA number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (Amides, tallow, N,N-bis(2-hydroxypropyl))
Class	:	9
Packing group	:	III
Labels	:	CLASS 9
ERG Code	:	171
Marine pollutant	:	yes(Amides, tallow, N,N-bis(2-hydroxypropyl))
Remarks	:	Shipment by ground under DOT is non-regulated; however it may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

49CFR: no dangerous good in non-bulk packaging

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
sodium methanolate	124-41-4	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Please note that Section 3 of this document lists only the hazardous components required by the specific country or region hazard communication regulations. The chemical identifiers listed in Section 3 are used globally for hazard communication purposes and may not reflect those used for chemical inventory coverage in a particular country or region. The chemical inventory information given in Section 15 of this document applies to the product as a whole and should be used when evaluating inventory compliance.

The components of this product are reported in the following inventories:

DSL	All components of this product are on the Canadian DSL
AICS	On the inventory, or in compliance with the inventory
NZIoC	On the inventory, or in compliance with the inventory
ENCS	On the inventory, or in compliance with the inventory
KECI	Not in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	Not in compliance with the inventory
TCSI	Not in compliance with the inventory
US.TSCA	Not On TSCA Inventory

SECTION 16. OTHER INFORMATION

Further information

Skin sensitisation
Specific Target Organ Toxicity

Other Emergency Phone Number

Latin America:	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
Mexico:		+52 555 004 8763

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.